THE BRITISH JOURNAL OF NON-DESTRUCTIVE TESTING

VOLUME 35 1993 - INDEXES

The British Journal of Non-Destructive Testing is published by
The British Institute of Non-Destructive Testing, 1 Spencer Parade, Northampton NN1 5AA, England
Telephone: Northampton (0604) 30124 (answering service) Telex: 31612 OTSSG, Fax: (0604 231489)

KEY TO ISSUES

Number 1	**January**	**1-52**	**Number 7**	**July**	**357-424**
Number 2	**February**	**53-108**	**Number 8**	**August**	**425-488**
Number 3	**March**	**109-164**	**Number 9**	**September**	**489-552**
Number 4	**April**	**165-220**	**Number 10**	**October**	**553-624**
Number 5	**May**	**221-296**	**Number 11**	**November**	**625-692**
Number 6	**June**	**297-356**	**Number 12**	**December**	**693-748**

NDT News and PCN Network are un-numbered inserts in each issue. Some correspondence is now in NDT News

REGULAR FEATURES AND SHORT TITLES

Aerospace Space 660
Condition Monitoring News . . 49, 161, 214, 293, 353, 423, 469, 520, 616, 684, 741
Correspondence, Comment . . . . . 111, 299, NDT News, Nov, 726
Council/Committees 45, 261, 479
Conference Report 395, 639
Croxson Memorial Lecture 315
Electronics Industry Spotlight 656
Engineering Council News . . . . . 99, 158, 204, 289, 416, 530, NDT News, Nov
EEC 220
Institute News 45, 107, 163, 219, 295, 355, 424, 473, 526, 599, 666, 726
John Grimwade Medal 263, 424, 473, 667
McColl Award 263, 424, 474, 666
Meetings File (Symposia)
European Council for NDT 96
International Committee for NDT 96
ASNT Fall Conference, Nov 1992 150
International Conference on NDT in Civil Engineering, Liverpool 470
Aerospace Visit to Heathrow 1993 471
The Scope and Limitations of Visual Inspection techniques 515
Is NDT R&D aimed at wealth creation? 584
Membership . 45, 107, 163, 220, 267, 295, 355, 424, 476, 477, 479, 527, 599, 667, 726
NDT Bookcase & Technical Literature 40, 98, 152, 204, 285, 343, 417, 535, 606, 673, 732
NDT Info 29, 87, 141, 195, 249, 331, 405, 451, 540, 609, 676, 733
NDT Newsdesk 43, 99, 158, 217, 289, 346, 416, 464, 518, 591, 662, 722
Nemet Award 263, 424, 474, 666
Obituaries
S Wise 107
J Davis 164, 219
B J Ratcliffe 355
T H Beynon 667
PCN 413, 483
Products & Services 37, 102, 154, 207, 279, 350, 420, 466, 548, 618, 686, 743
Roy Sharpe Prize 263, 395, 424, 475, 666
SANDT 263, 424
Service Inspection Group (SIG) News 659
Short Story 356, 488
SNT Group 45, 164, 519, 528, 592
Standard News 41, 98, 153, 205, 285, 343, 418, 536, 606, 673, 732
T H Cole Award 667
Technical Notes 149, 247, 573
Yearbook 295

AUTHOR INDEX

Anselme F (see Windsor C G) 15
Atherton D L (with Mergelas B J)
The Phantom Exciter: high resolution measurements of RFEC slit defect interactions 568
Atherton D L (with Dhar A)
Correlation between magnetic flux leakage and magnetic Barkhausen noise in steel pipeline 307
Auckland D W (with McGrail A J and Varlow B R)
Determination of positional information with a 6-D 'mouse' during the ultrasonic inspection of high voltage insulation 562
Austin B A (See Shaw M R) 696
Baldev Raj (see Thavasimuthu M) 125
Baldev Raj (see Venkatraman B) 557
Baldock C (see Hughes S W) 369
Bashford P
Corrosion never sleeps 508
Bell R (with Harrington D S)
A mobile DCPD probe arrangement for improved crack profile measurements . 497
Bhattacharya D K (see Thavasimuthu M) 125
Bhattacharya D K (see Venkatraman B) 557
Bhole V M (with Rastogi P K, Kulkarni P G, Vijayaraghavan R)
Eddy current monitoring of spacers in coolant channel assemblies of nuclear reactor 133
Billson D R (with Hutchings D A)
Development of novel piezoelectric ultrasonic transducers for couplant-free non-destructive testing 705
Bowman R M (see Cochran A) 173
Bull C E (with Stacey K A, Calcraft R)
On-line weld monitoring using ultrasonics 57
Bungey J H (see Shaw M R) 696
Calcraft R (see Bull C F) 57
Capineri L (see Windsor C G) 15
Cashman M
Technical Note. Revision of BS:4331:1978 149
Chapman R K (with Firth D, Gould R F, Ogilvy J A, Schneider C R A, Temple J A G)
PISC III action 6 on ultrasonic modelling: contributions and perspective from two UK participating companies 310
Charlton P C (with Granville R K)
Real-time automated tube inspection system 11
Charlton P C (with Drury J C)
The high speed inspection of bulk liquid storage tank floors, using the magnetic flux leakage method 169
Charlton P C
Investigation into the suitability of a neural network classifier for use in an automated tube inspection system 433
Cochran A (with Donaldson G B, Morgan L N C, Bowman R M, Kirk K J)
SQUIDS for NDT: the technology and its capabilities 173

Cowking A (see Hill R) 225

Daniels V
The use of the 'Russell' effect in non-destructive testing 375

Davis R (see Hughes S W) 369

Dhar A (with Atherton D L)
Correlation between magnetic flux leakage and magnetic Barkhausen noise in steel pipelines 307

Domanus J C
International neutron radiography Newsletter No 22. Practical neutron radiography 85

Donaldson G B (see Cochran A) 173

dos Reis H L M
Acousto-ultrasonic non-destructive evaluation of windshield laminated safety glass 565

Drake S G
Improved real-time X-ray technology widens the horizons of industrial computer tomography 580

Drury J C (with Charlton P C)
The high speed inspection of bulk liquid storage tank floors using the magnetic flux leakage method 169

Dulay D S
MIL.STD.410 - the solution to certification 65

Dunlop I (with McNab A)
Advanced visualisation and interpretation techniques for the evaluation of ultrasonic data: the NDT workbench 233

Edwards I (with Gros X E, Lowden D W, Strachan P)
Fusion of NDT data 710

Filby A G
Impressions of the ESDA technique in document examination 387

Firth D (see Chapman R K) 310

Flynn B W (with Whittington H W)
High reliability condition monitoring systems 648

Ford P
Monitoring the cause, not the effect: a magnetic particle inspection dilemma? . . 660

Geng R S (see Hill R) 225

Glazier E J
The use of hard X-rays in forensic science 385

Gould R F (see Chapman R K) 310

Granville R K (with Charlton P C)
Real-time automated tube inspection system 11

Greenfield S
Back to Basics - the magnetic chip collector 25

Gros X E
Real-time radiography of underwater pipelines 492

Gros X E (see Edwards I) 710

Guettinger T W (with Suhr H)
Error reduction in eddy current conductivity measurements 634

Halmshaw R
Scattered radiation in industrial radiography 113

Halmshaw R
Technical note. The X-radiography of small irregular-thickness specimens . . . 573

Halmshaw R
IQIs and pipe weld radiography 714

Harrington D S (with Bell R)
A mobile DCPD probe arrangement for improved crack profile measurements . 497

Hayward D (see Joshi S B) 130

Haywood N C
An advanced eddy-current bore-hole inspection system 119

Heath J
The Blackburn Shark 513

Higgins T (with Lang J)
Recent developments in radiography at the British Museum 363

Hill R (with Geng R S, Cowking A)
Acoustic and electromagnetic Barkhausen emission from iron and steel: application of the technique to weld quality assessment and NDE 225

Hobbs C (with Temple A)
The inspection of aerospace structures using transient thermography 183

Holroyd T J (with Randall N)
Use of acoustic emission for machine condition monitoring 75

Houlden M A (see Shaw M R) 696

Hughes S W (with Sofat A, Baldock C, Wong W, Tonge K, Davis R, Spencer J)
CT imaging of an Egyptian mummy 369

Hunt T
Condition monitoring by debris analysis - a note of clarification and amplification 23

Hutchings D A (with Billson D R)
Development of novel piezoelectric ultrasonic transducers for couplant-free non-destructive testing 705

Islam M (see Lawson K M) 319

John E G
Technical note. Dye penetrants - an aid to conductivity fault location on printed circuit boards? 247

Joshi S B (with Pethrick R A, Hayward D)
Aspects of theoretical modelling for high frequency dielectric studies of adhesively bonded structures 130

Kaasinen H
Assessing the quality of the waterproofing of bridges using thermography . . . 301

Kirk K J (see Cochran A) 173

Kolbe P
The scope and limitations of visual inspection techniques 515

Kolbe P
Is NDT aimed at wealth creation? 584

Kulkani P G (see Bhole V M) 133

Lang J (with Higgins T)
Recent developments in radiography at the British Museum 363

Lau K T (see Ooi T H) 439

Lawson K M (with Thompson N G, Islam M, Schofield M J)
Monitoring corrosion of reinforced soil structures 319

Lim Mong King (see Wong B S) 3

Lim C H (see Ooi T H) 439

Lowden D W (see Edwards I) 710

Mak D K
Ultrasonic phase velocity measurement incorporating couplant correction . . . 443

Marshall P
Some basic guidelines to retirement planning 532

Mason J P (see Windsor C G) 15

McGrail A J (see Auckland D W) 562

McNab A (with Dunlop I)
Advanced visualisation and interpretation techniques for the evaluation of ultrasonic data: the NDT workbench 233

Mechefske C K
Machine condition monitoring.
Part 1 Optimum vibrations signal lengths 503
Part 2 The effects of noise in the vibration signal 574

Mergelas B J (with Atherton D L)
The phantom exciter: high resolution measurements of RFEC slit defect interactions 568

Millard S G (see Shaw M R) 696

Morgan L N C (see Cochran A) 172

Nayar V U (see Ravindran V R) 429

Nestleroth J B
The remote field eddy current technique for stress corrosion cracking and identification 241

Nian Wen-Xue (with Zhong Wei-Chang)
Disappearance and reappearance of magnetic particle indications on hairline cracks, when remagnetised 717

Ogilvy J A (see Chapman R K) 310

Ooi T H (with Lau K T, Lim C H, Yeo A)
DSP-based high speed measurement system for hybrid oscillators 439

Parry S J
Activation spectrometry: evidently neutrons provide the clues to non-destructive multielement analysis 393

Pethrick R A (see Joshi S B) 130

Randall N (with T J Holroyd)
Use of acoustic emission for machine condition monitoring 75

Rao C Babu (see Venkatraman B) 557

Rastogi P K (see Bhole V M) 133

Ravindran V R (with Sarma AVSSSR, Nayar V U)
Holographic non-destructive testing (HNDT) of low modulus materials using a bending load 429

Rendle D F
The use of soft X-rays in forensic science 381

Sarma AVSSSR (see Ravindran V R) 429

Schneider C R A (see Chapman R K) 310
Schofield M J (see Lawson K M) 319
Senior C
Continuing professional development - the Engineering Council's framework for action 530
Shaw M A (with Millard S G, Houlden M A, Austin B A, Bungey J H)
A large diameter transmission line for the measurement of the relative permittivity of construction materials 696
Sofat A (see Hughes S W) 369
Spencer J (see Hughes S W) 369
Stacey K A (see Bull C E) 57
Strachan P (see Edwards I) 710
Subramanian C V (see Thavasimuthu M) 125
Suhr H (with Guettinger T W)
Error reduction in eddy current conductivity measurements 634
Temple A (with Hobbs C)
The inspection of aerospace structures using transient thermography 183
Temple J A G (see Chapman R K) 311
Thavasimuthu M (with Subramanian C V, Bhattacharya D K, Baldev Raj)
Crack closure and ultrasonic examination - a few practical observations 125
Thompson N G (see Lawson K M) 319
Tonge K (see Hughes S W) 369
Tui Cheng Guan (see Wong B S) 3
Varlow B R (see Auckland D W) 562
Venkatraman B (with Rao C Babu, Bhattacharya D K, Baldev Raj)
Radiography of medieval investment-cast idols of India 557
Vijayaraghavan R (see Bhole V M) 133
Wassell A B
Safety and reliability in the air 315
Watson J
High precision measurement by holograммetry 628
Whittington H W (with Flynn B W)
High reliability condition monitoring systems 648
Windsor C G (with Anselme F, Capineri L, Mason J P)
The classification of weld defects from ultrasonic images: a neural network approach 15
Wong B S (with Tui Cheng Guan, Lim Mong King)
Mechanical impedance inspection of composite structures 3
Wong W (see Hughes S W) 369
Yeo A (see Ooi T H) 439
Zhong Wei-Chang
Magnetic particle inspection - a new theory 68
Zhong Wei-Chang (with Nian Wen-Xue)
Disappearance and reappearance of magnetic particle indications on hairline cracks, when remagnetised 717

SUBJECT INDEX

ACOUSTIC EMISSION
Use of acoustic emission for machine condition monitoring
T J Holroyd, N Randall 75

ADHESIVE BONDING
Aspects of theoretical modelling for high frequency dielectric studies of adhesively bonded structures
S B Joshi, R A Pethrick, D Hayward 130

AEROSPACE APPLICATIONS
The inspection of aerospace structures using transient thermography
C Hobbs, A Temple 183
Safety and reliability in the air
A B Wassell 315
Corrosion never sleeps
P Bashford 508
The Blackburn Shark
J Heath 513

ARCHEOLOGY
Recent developments in radiography at the British Museum
J Lang, T Higgins 363
CT imaging of an Egyptian mummy
S W Hughes, A Sofat, C Baldock, W Wong, K Tonge, R Davis, J Spencer . . . 369
Radiography of medieval investment-cast idols of India
B Venkatraman, C Babu Rao, D K Bhattacharya, Baldev Raj 557

BACK TO BASICS
The magnetic chip collector
S Greenfield 25

BARKHAUSEN NOISE
Acoustic and electromagnetic Barkhausen emission from iron and steel: application of the technique to weld quality assessment and NDE
R Hill, R S Geng, A Cowking 225
Correlation between magnetic flux leakage and magnetic Barkhausen noise in steel pipelines
A Dhar, D L Atherton 307

BRIDGE INSPECTION
Assessing the quality of the waterproofing of bridges using thermography
H Kaasinen 301

CASTING INSPECTION
Radiography of medieval investment-cast idols of India
B Venkatraman, C Babu Rao, D K Bhattacharya, Baldev Raj 557

CERTIFICATION
MIL.STD.410 - the solution to certification
D S Dulay 65

COMPOSITES
Mechanical impedance inspection of composite structures
B S Wong, Tui Cheng Guan, Lim Mong King 3

COMPUTER TOMOGRAPHY
CT imaging of an Egyptian mummy
S W Hughes, A Sofat, C Baldock, W Wong, K Tonge, R Davis, J Spencer . . 369
Improved real-time X-ray technology widens the horizons of industrial computer tomography
S G Drake 580

CONCRETE
A large diameter transmission line for the measurement of the relative permittivity of construction materials
M R Shaw, S G Millard, M A Houlden, B A Austin, J H Bungey 696

CONDITION MONITORING
Condition monitoring by debris analysis - a note of clarification and amplification
T Hunt 23
Back to Basics - the magnetic chip collector
S Greenfield 25
Use of acoustic emission for machine condition monitoring
T J Holroyd, N Randall 75
Eddy current monitoring of spacers in coolant channel assemblies of nuclear reactor
V M Bhole, P K Rastogi, P G Kulkani, R Vijayaraghavan 133
Monitoring corrosion of reinforced soil structures
K M Lawson, N G Thompson, M Islam, M J Schofield 319
DSP-based high speed measurement system for hybrid oscillators
T H Ooi, K T Lau, C H Lim, A Yeo 439
Machine condition monitoring
Part 1 Optimum vibration signal lengths
Part 2 The effects of noise in the vibration signal
C K Mechefske 503, 574
High reliability condition monitoring systems
H W Whittington, B W Flynn 648

CORROSION
Monitoring corrosion of reinforced soil structures
K M Lawson, N G Thompson, M Islam, M J Schofield 319
Corrosion never sleeps
P Bashford 508

CRACK DETECTION
Crack closure and ultrasonic examination - a few practical observations
M Thavasimuthu, C V Subramanain, D K Bhattacharya, Baldev Raj 125
The remote field eddy current technique for stress corrosion crack detection and identification
J Bruce Nestleroth 241
A mobile DCPD probe arrangement for improved crack profile measurements
D S Harrington, R Bell 497

DATA PROCESSING
The classification of weld defects from ultrasonic images: a neural network approach
C G Windsor, F Anselme, L Capineri, J P Mason 15
Investigation into the suitability of a neural network classifier for use in an automated tube inspection system
P C Charlton 433
Fusion of NDT data
I Edwards, X E Gros, D W Lowden, P Strachan 710

EDDY CURRENTS
Real-time automated tube inspection system
R K Granville, P C Charlton 11
An advanced eddy-current bore-hole inspection system
N C Haywood 119
Eddy current monitoring of spacers in coolant channel assemblies of nuclear reactor
V M Bhole, P K Rastogi, P G Kulkani, R Vijayaraghavan 133
The remote field eddy current technique for stress corrosion crack detection and identification
J Bruce Nestleroth 241
The phantom exciter: high resolution measurements of RFEC slit defect interactions
B J Mergelas, D L Atherton 568
Error reduction in eddy current conductivity measurements
H Suhr, T W Guettinger 634

ESDA TECHNIQUE (DOCUMENT EXAMINATION)
Impressions of the ESDA technique in document examination
A G Filby 387

FORENSIC SCIENCE AND MEDICINE
The use of soft X-rays in forensic science
D F Rendle 381
The use of hard X-rays in forensic science
E J Glazier 385

HOLOGRAPHY
Holographic non-destructive testing (HNDT) of low modulus materials using a bending load
V R Ravindran, AVSSSR Sarma, V Unnikrishnan Nayar 429
High precision measurement by hologrammetry
J Watson 628

INSULATION INSPECTION
Determination of positional information with a 6-D 'mouse' during the ultrasonic inspection of high voltage insulation
D W Auckland, A J McGrail, B R Varlow 562

MAGNETIC METHODS
The magnetic chip collector
S Greenfield 25
Magnetic particle inspection - a new theory
Zhong Wei-Chang 68
The high speed inspection of bulk liquid storage tank floors using the magnetic leakage method
P C Charlton, J C Drury 169
SQUIDS for NDT: the technology and its capabilities
A Cochran, G B Donaldson, L N C Morgan, R M Bowman, K J Kirk 173
Correlation between magnetic flux leakage and magnetic Barkhausen noise in steel pipelines
A Dhar, D L Atherton 307
Monitoring the cause, not the effect: a magnetic particle inspection dilemma?
P Ford 660
Disappearance and reappearance of magnetic particle indications on hairline cracks, when remagnetised
Zhong Wei-Chang, Nian Wen-Xue 717

MECHANICAL IMPEDANCE
Mechanical impedance inspection of composite structures
B S Wong, Tui Cheng Guan, Lim Mong King 3

MODELLING
Aspects of theoretical modelling for high frequency dielectric studies of adhesively bonded structures
S B Joshi, R A Pethrick, D Hayward 130
PISC III action 6 on ultrasonic modelling: contributions and perspective from two UK participating companies
R K Chapman, D Firth, R F Gould, J A Ogilvy, C R A Schneider, J A G Temple 310

NEUTRON ACTIVATION SPECTROMETRY
Activation spectrometry: evidently neutrons provide the clues to non-destructive multielement analysis
Susan J Parry 393

NEUTRON RADIOGRAPHY
International neutron radiography Newsletter No 22. Practical neutron radiography
J C Domanus 85

OSCILLATORS
DSP-based high speed measurement system for hybrid oscillators
T H Ooi, K T Lau, C H Lim, A Yeo 439

PENETRANTS
Dye penetrants - an aid to conductivity fault location on printed circuit boards?
E G John 247

PIPELINE INSPECTION
Correlation between magnetic flux leakage and magnetic Barkhausen noise in steel pipelines
A Dhar, D L Atherton 307
Real-time radiography of underwater pipelines
X E Gros 492
IQIs and pipe weld radiography
R Halmshaw 714

PISC-III
PISC III Action 6 on ultrasonic modelling: contributions and perspective from two UK participating companies
R K Chapman, D Firth, R F Gould, J A Ogilvy, C R A Schneider, J A G Temple 310

POTENTIAL DROP METHOD
A mobile DCPD probe arrangement for improved crack profile measurements
D S Harrington, R Bell 497

PROFESSIONAL DEVELOPMENT
Continuing professional development - the Engineering Council's framework for action
C Senior 530

RADIOGRAPHY
Scattered radiation in industrial radiography
R Halmshaw 113
Recent developments in radiography at the British Museum
J Lang, T Higgins 363
The use of the 'Russell' effect in non-destructive testing
V Daniels 375
The use of soft X-rays in forensic science
D F Rendle 381
The use of hard X-rays in forensic science
E J Glazier 385
Real-time radiography of underwater pipelines
X E Gros 492
Radiography of medieval investment-cast idols of India
B Venkatraman, C Babu Rao, D K Bhattacharya, Baldev Raj 557
The X-radiography of small irregular-thickness specimens
R Halmshaw 573
Confusion surrounds IQI sensitivity and density in radiography
A M Brookes . . . . . NDT News (Nov)
IQIs and pipe weld radiography
R Halmshaw 714

RETIREMENT PLANNING
Some basic guidelines to retirement planning
P Marshall 532

RUSSELL EFFECT
The use of the 'Russell' effect in non-destructive testing
V Daniels 375

SQUIDS
SQUIDS for NDT: the technology and its capabilities
A Cochran, G B Donaldson, L N C Morgan, R M Bowman, K J Kirk 173

STANDARDS
CEN Standards in non-destructive testing, 3rd Progress Report 718

THERMOGRAPHY
The inspection of aerospace structures using transient thermography
C Hobbs, A Temple 183
Assessing the quality of the waterproofing of bridges using thermography
H Kaasinen 301

TUBE INSPECTION
Real-time automated tube inspection system
R K Granville, P C Charlton 11
Investigation into the suitability of a neural network classifier for use in an automated tube inspection system
P C Charlton 433

ULTRASONIC TESTING
The classification of weld defects from ultrasonic images: a neural network approach
C G Windsor, F Anselme, L Capineri, J P Mason 15
On-line weld monitoring using ultrasonics
C E Bull, K A Stacey, R Calcraft 57
Crack closure and ultrasonic examination - a few practical observations
M Thavasimuthu, C V Subramanian, D K Bhattacharya, Baldev Raj 125
Revision of BS:4331:1978
M Cashman 149
Advanced visualisation and interpretation techniques for the evaluation of ultrasonic data: the NDT workbench
A McNab, I Dunlop 233
PISC III action 6 on ultrasonic modelling: contributions and perspective from two UK participating companies
R K Chapman, D Firth, R F Gould, J A Ogilvy, C R A Schneider, J A G Temple 310
Ultrasonic phase velocity measurement incorporating couplant correction
D K Mak 443
Determination of positional information with a 6-D 'mouse' during the ultrasonic inspection of high voltage insulation
D W Auckland, A J McGrail, B R Varlow 562
Acousto-ultrasonic non-destructive evaluation of windshield laminated glass
H L M dos Reis 565
Development of novel piezoelectric ultrasonic transducers for couplant-free non-destructive testing
D R Billson, D A Hutchings 705

VIBRATION MEASUREMENT
Machine condition monitoring
Part 1 Optimum vibration signal lengths
Part 2 The effects of noise in the vibration signal
C K Mechefske 503, 574

VISUAL INSPECTION
The scope and limitations of visual inspection techniques
P Kolbe 515

WELD INSPECTION
The classification of weld defects from ultrasonic images: a neural network approach
C G Windsor, F Anselme, L Capineri, J P Mason 15
On-line weld monitoring using ultrasonics
C E Bull, K A Stacey, R Calcraft 57
Acoustic and electromagnetic Barkhausen emission from iron and steel: application to weld quality assessment and NDE
R Hill, R S Geng, A Cowking 225

The Ionising Radiations (Outside Workers) Regulations 1993

Regulation, Approved Code of Practice and Non-Statutory Guidance
An editorial item on this subject on Page 726 of this issue states that copies of the Regulations, ACOP and associated non-statutory guidance will be available mid-December.

A draft copy of these documents has now been received by the Technical Secretary and is available for perusal. The following is a list of contents.

Notice of Approval
Preface
Introduction
Regulation 1: Citation and Commencement
Regulation 2: Interpretation
What comes within the definition of 'activities'
Clarification of difference between 'dose assessment' and 'dose estimate'
Who is the 'operator'
Who are 'outside workers'
Regulation 3: Application
Circumstances where operators are relieved of certain duties
Outside workers from Northern Ireland or other member States
Relationship of these Regulations to IRR85
Regulation 4: Duties of the Outside Undertaking
Arrangements for information exchange and training etc before activities commence
Maintaining dose assessment for outside workers outside GB
Regulation 5: Radiation Passbooks
Purpose of the radiation passbook
Suitable arrangements for keeping the passbook up to date
Recording issue and loss of any passbook
Action by outside undertaking when a passbook has been reported as lost
Retention of withdrawn passbook
Issuing a new passbook
Regulation 6: Duties of the Operator
Actions to ensure that the outside workers are suitable
Arrangements outside normal working hours
Estimating doses - general
Methods of estimating external exposure
Methods of estimating internal exposure
Estimates of dose from a contamination incident
Entering dose estimates in passbooks
Circumstances when an operator need not enter a dose estimate each time.

CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

CPD is:
- an essential element of career advancement
- a great benefit to the individual and the profession
- likely to be a requirement of the Engineering Council for continuing registration
- regarded by employers as important for existing staff and new recruits
- something that should be embarked on early

The British Institute of Non-Destructive Testing is committed to CPD

JOB SEARCH

Innovative Engineer, MInstNDT, seeks position within an NDT environment. Experience primary and secondary metals defect detection. Anywhere UK. *JS 71.*

BELMONT
NON-DESTRUCTIVE TESTING
INSPECTION & QUALITY SERVICES

Independent professional NDT services

Welding QA and TQM consultancy
Non-destructive examination in ultrasonics, radiography, magnetic particle, penetrant, eddy current, visual.
Level III services: documentation; audit
NDT system management - industrial/aerospace
ASNT III JM1141 MT, PT, RT, UT
PCN III UT, MT, PT
For Level III services contact Matt Clark

Equipment sales - purchase and hire

Presently on offer: quality used equipment
* Pantak 200 kV CP unit complete with gantry
* Balteau 140 kV X-ray cabinet (fully enclosed)
* Sonatest UFD & Sitescan 100 and USM2 UT units
* Magnetic particle bench units, bed lengths 18-96", 1000-5000 A AC/DC etc
* Rapitech auto developing unit, industrial radiographic
* Penetrant tank system and developing tanks
* UV-A light units
* Magnetic prod units

For details of any of the above equipment or services, please call without obligation:

Belmont House, Low Green, Rawdon,
LEEDS LS19 6HA
West Yorkshire. England
Fax: (0532) 391171
Tel: (0532) 502550/502233